

## MEMORANDUM FOR RECORD

11 July 2002

SUBJECT: Corps Specifications Steering Committee Meeting

The Specifications Steering Committee met 25 – 26 June 2002, at the Las Vegas Convention Center, Las Vegas, NV. Attendance list and Agenda are attached as enclosures 1 and 2, respectively.

### 2003 INFRASTRUCTURE CONFERENCE

The Infra-Structure Conference (ISC) is scheduled for 6-8 May 2003, Las Vegas Convention Center. Advertised lodging at government rates will be at Bally's Hotel, which is within a hearty walking distance of the convention center. The last Infrastructure conference had 750 attendees, and 64 vendors. The 2003 conference hopes to double those numbers. Specifications will be one of the technical disciplines at the conference. The number of participants in the specifications breakout meetings were estimated to be about 70 people.

Freddie sent out a memorandum on 2 July to query for topics of interest at the ISC, SpecsIntact problems, and RMS interfacing problems. Responses are due 30 July. The CSSC will also review notes from previous workshops to see if there were unresolved issues. The CSSC recommended topics for specification presentations include:

1. Design-Build specifying
2. SpecsIntact Updates (invited speaker from Indyne)
3. What specifier's need to know about RMS
4. Whole Building Design Guide (invited speaker from NIBS)
5. Product Specifying (invited speaker from Tomas Register)
6. Relationship between cost engineering and specifications (invited speaker from R. S. Means)

### APPROVAL OF MINUTES

Minutes for last meeting were approved. CSSC meeting minutes are posted on the TECHINFO page at <http://www.hnd.usace.army.mil/techinfo/cssc/history.htm>.

### NEW CSSC MEMBERS

Terms expire for 2 District members of the CSSC after this meeting. Anil Nisargand and Tom Andre each served 4 years. Division nominators reviewed resumes of the candidates to replace Anil and Tom. Paper write-in ballots were passed to Freddie, who read votes, and Joe Miller recorded. Terry Vitt and Don Carmen were elected.

Robert Iseli, Mech Engr at LRD will be replacing Larry Seals as MSC member. Benny Hom, NAD, will be replacing John Kerkowski as MSC member.

## OUTSOURCING

Management at HQUSACE is being required to study outsource certain positions by DoD/OMB. Outsourcing could include up to 15,000 USACE jobs. Engineering at HQUSACE is working on a rebuttal to that. Attractive positions to outsource appear to be hired labor (blue collar positions). One particular large group that is under discussion is the operations staff at locks and dams (excluding the Lockmaster). A study will be necessary to show the least cost alternative. Outsourcing certain positions is a recent management initiative in private industry – it is not restricted to the Government. Some background on Government outsourcing includes:

- Office of Management and Budget Circular A-76 (adopted in 1966) sets out rules for competition between the public and private sectors. The circular helps define the type of work suitable for such competitions—everything except inherently governmental functions.
- 10 U.S. Code, Section 2462 requires the DOD to contract out nongovernmental functions that can be done more economically by the private sector. Section 2462 is based on the lowest-priced bidder, not the best value.
- The Arsenal Act requires DOD to keep certain core competencies in-house.
- The Federal Activities Inventory Reform (FAIR) Act of 1998 requires agencies to list functions that could be outsourced to industry. The new Bush administration has placed increased focus on the FAIR Act and federal use of commercial resources. This is laid out in the new fiscal 2002 budget and in several memos from the Office of Management and Budget detailing specific goals for agencies over the next year.
- Section 832 of the authorization act requires that a study be submitted by May 1, 2002, that reviews the procedures for determining whether functions should continue to be performed by government employees. The report also will examine procedures for comparing the cost of the government performing a function vs. outsourcing that function to a contractor. It will also look at the procedures for the Defense Department to best perform public/private competitions under Office of Management and Budget Circular A-76 and DOD's implementation of the FAIR Act.

## SICCCB UPDATE

Steve Frietas and Jim Quinn attended the SICCCB meeting. The next meeting is scheduled for November 2002.

The controversial topic at the SICCCB meeting was on the vast number of SpecsIntact verification reports that are generated on the UFGS database. The verification reports include 626 pages of reference title discrepancies, address verification errors, reference processing errors, 5 pages of references cited in text but not in references paragraph, 6 pages of text but in references paragraph but not cited in text, submittal description problems, section verification errors, and others. Rick Dahnke has set a priority on rectifying the problems, and has vowed not to attend another meeting until significant progress is made. Indyne will be implementing many of the

updates under their current contract, and is very confident they can implement these changes expediently. Indyne has been processing specification updates; and Jim Quinn has been very satisfied with this arrangement.

After the current verification report errors are corrected, Indyne and Quinn will run the verification reports on the UFGS database at least once a year. Specification updates and implementation of the 43-division Master Format may impose new errors, which will need to be purged regularly.

New 32-bit SpecsIntact: Beta Version is expected very soon. After the beta test, it will be available on the Internet for download. The final release is scheduled for end of September 2002. Some new features include global (from the jobs directory, which includes multiple sections) removal of change tags, and global search and replace.

Rick may need to get accreditation on SpecsIntact for information management security. The cost to accredit SpecsIntact and RMS is unknown. The Dept of State spent about \$100K and produced a 2" thick report for a similar effort for their usage of DrChecks.

## CRITERIA MANAGEMENT SYSTEM

Office of Council has been concerned about posting problems available to the public on the Criteria Management System. They will be making a decision shortly. Dr. Checks and the Lessons Learned (other modules on the Builder's Net web site) were not an issue - only the Criteria Management module.

Joe Miller has been active in testing the Corporate Lessons Learned (now DQLL) module on the Builders Net web site. The Corporate Lessons Learned module is set up so that the lessons learned are released through gate keepers. How the gate keepers release the lessons learned, and how a user logs on, seems to affect access privileges. Joe can presently retrieve 140 lessons learned from his access privileges. All were technical oriented lessons.

## UFGS MAINTENANCE

The concept of billing districts for maintaining UFGS and criteria was discussed at the last CSSC meeting. The concept was proposed because of the erratic funding from forcing balancing budgets. HQUSACE decided this should be a HQ function. The specifications will continue to be separated from criteria funding. MILCON funding is in pretty good shape; civil works is under funded. For civil works, \$1.2 million was requested and about \$850,000 was approved last year.

Combining Army, Navy and Air Force guide specifications into the UFGS database is scheduled as a 5-year effort (through 2008) at present funding levels. There will be \$6.18 million in Tri-service money this year for unification. Similar funding projections are made in following years. The UFGS presently has 85 sections that have been merged, 352 Navy sections, and 364 Army sections. NASA may join the UFGS system in a year or two. NASA will contribute about 60 sections.

The Navy specs included in last meeting minutes are being done by AE contract. The AE is highlighting differences and changes between the Army and Navy. The revisions will be routed to the proponent and tech rep. The update schedule includes 43 sections in 2001, 23 sections in 2002 (6 were recently added to the 17 originally planned), and 20 sections in 2003.

Section 01330 Submittals was structured with Army/Navy tailoring tags because merging the agency requirements would require extensive coordination. Work to merge the actual administrative requirements (eliminating the army/navy tailoring tags) may resurface.

## NAVY UPDATE

In addition to continuing work on the UFGS maintenance, the Navy is working on standard criteria for Design-Build. The Corps presently has only issued example Design-Build projects for some selected Standard Designs.

## MANDATORY USE OF UFGS GUIDE SPECIFICATIONS

A memorandum from the Under Secretary of Defense was issued 29 May 2002 regarding use of UFGS. The memorandum states that the UFGS “are to be used by the Military Departments .....for planning, design, construction, sustainment, restoration, and modernization of facilities, regardless of funding source.” Interpreted literally, the memo makes UFGS mandatory for all DOD construction contracts, including civil works.

The CSSC believes the UFGS should not be mandatory for design-build contracts, since that would reduce the benefits of the design-build concept of allowing the contractor maximum flexibility to conduct the work as they typically do, to maximize productivity and efficiency. The CSSC also questioned mandatory use of UFGS on cost shared projects, where the local sponsor requests other specifications, because this violates the PMBP principles (Is it good for the customer? Is it legal and ethical? And are we willing to be accountable for it?).

The CSSC committee recommends clarification of the memorandum, which should be included in the Joint Engineering Regulation on Plans and Specifications.

## CSI PRESENTATION ON NEW 43 DIVISION MASTER FORMAT

Dennis Hall visited the CSSC meeting and presented the 43 division master format. The presentation was abbreviated from a technical session for the CSI exposition, and a copy of 48 power point presentation slides were distributed to the CSSC. Mr. Hall is the Chair of the Master Format Expansion Task Team, and also the lead on the Master Format Work Groups for Divisions 0, 1 and 2. Greg Ceton, CSI technical coordinator, also attended the presentation.

The reason for the revised Master Format scheme is to expand beyond the building industry, to heavy/horizontal construction, and maintenance (total project life cycle). A demonstration that change is needed is that the communication industry has been using a Division 17, which has evolved without CSI coordination.

Mr. Hall stressed that there has been extensive coordination with stake holders. There is a discussion group site at <http://www.csinet.org>. The CSSC specifically questioned coordination among suppliers of specifications and cost information. R. S. Means is aware, but has not been involved. McGraw Hill, and Suites catalog have been supportive. It is apparent that the DOD is a small stake holder among the vast amount of industry groups represented. CSI has contacted the Army to solicit input, but had not contacted anyone on the CSSC. CSI's point of contact for the Army was reportedly "Fran'ce wa Grovler". No one present knew who he is or how to spell his name.

Mr. Hall gave a history of the Master Format expansion. Some important dates include:

Phase I – Organizational Development

Nov. 2001. The 43-division scheme (first draft) for Master Format expansion was developed.

Jan. 2002. The 43-division scheme was approved CSI executive committee.

Phase II – Concept Development

Feb. 2002. The 43-division scheme was presented to organizations outside the CSI community.

April 2002. The 43-division scheme was presented to industry groups.

Sep. 2002. The second draft will be published for public comment.

Mar 2003. The final draft will be published for public comment.

April 2003. The final product will be presented at CSI convention. The final product will not be available for purchase until 2004.

The DOD implementation cost for the 43-division Master Format needs to be determined. It appears the implementation cost for UFGS would be in a manageable order of magnitude, although itemized funding for this task may be required. Prior to Mr. Hall's presentation, the CSSC considered hiring Ray Duncan to determine: implementation cost for UFGS, benefits for UFGS, and cost impacts of not implementing in UFGS. Based on Mr. Halls presentation, this cost analysis may not be necessary. Tri-services Cost Estimating may incur higher costs because the MCACES Unit Price Book is organized by Master Format. The CSSC is also interested in implementation costs incurred by private industry.

In the revised 43 division Master Format, the level 2 and 3 titles sometimes change; so sections that are broad in scope (such as 02300 Earthwork - a level 2 section, and 02315 Excavation and Fill - a level 3 section) could potentially contain topics that are now reorganized under different title levels. In the long term, this could affect major section revisions. But in the short term, it is not necessary to split sections apart to be in general compliance with the new MasterFormat. This interpretation was confirmed by Mr. Hall, who stated that CSI's initial plans for implementing the 43 division Master Format into Master Spec is limited to renumbering sections. Thus, the implementation cost would be to simply renumber the UFGS database (without any actual editing). Renumbering would include repairing section references within the guide specifications.

The CSSC considered not adopting the new 43-division Master Format, and keeping Master Format 95. Not adopting the current Master Format would have cost impacts because it would be confusing to the users and the advantages of a standard system, such as numbers that coincide with manufacturer's literature, would be lost.

CSI is soliciting comments, so quick feedback from stake holders will be more effective. Feedback near the final product stage will be more difficult to implement, and will have less influence on the final product. The consensus at this time is that the CSSC is not enthusiastic about the 43-division Master Format. The CSSC is considering a letter to CSI, with the following points:

1. There are minimal benefits to DOD.
2. DOD will be hesitant to implement, and has no immediate plans to implement.
3. There is no current funding to implement the 43-division Master Format in the DOD, so there is no guarantee it will ever be implemented.

Freddie will be collecting comments up to 15 July. If there is substantial interest, Freddie will compile and send a recommendation to CSI.

## BULK PURCHASE OF STANDARDS

The contract for bulk purchase of standards was advertised, and about 10 vendors expressed interest. Rick was under the impression that most vendors did not realize the schedule to have an operational system in place by August 2002. The vendor list has been narrowed to just Information Handling Services ("IHS"). There is an existing Navy contract with "IHS" that will be expanded to the DOD. The money is available, and negotiations have started.

The number of users at one time will be limited to 10. The contract will be renewed annually, so contract specifics can be adjusted annually after they know if they under or over prescribe. The access is limited by IP addresses, so each user will need to access the "IHS" site through their office Internet.

## HYPERLINKS

Hyperlinks within construction/A-E contracts are being reviewed, because contracts need to be controlled as a constant, unaltered agreement. The hyperlink issue is similar to referenced standards. A hyperlinked document, or a referenced document, needs to be constant and retrievable.

Hyperlinks to live documents must be avoided. Documents that are subject to change should be included in the attachments. Caution is recommended when using hyperlinks in contract documents (both construction/AE services). Hyperlinks are okay to jump within an internal document, but "external" hyperlinks should not be used. If an external document requires a link, the document should be archived with the contract documents and linked internally.

Freddie sent an Email regarding hyperlinks through Rick, and onto the PARC office. The PARC responded that they would not be opposed to a well written disclaimer. Hyperlinks should be addressed in the Joint ER on Drawings and Specifications.

## INTERNATIONAL BUILDING CODE (IBC) ADOPTION

The IBC content is very similar to the Uniform Building Code. The DOD is considering adopting the IBC. A Unified Facilities Criteria document will be generated that indicates where DOD criteria differs from the IBC. HQUSACE is doing technical review of NFPA issues.

## JOINT ER ON PLANS AND SPECS

Baltimore District had initially agreed to author the Joint ER on Plans and Specifications for about \$15k. Baltimore District later decided they could not deliver. The CSSC reassigned the task to Sacramento District last December for an estimated \$25k. In June 2002, Sacramento had a meeting, and revised their estimated cost to complete this at \$150 k; and then stated they were not willing to accept the assignment. Sacramento District's estimate was based on 3 people with experience in civil works, military, and project management. Presently, there is only about \$25K available funding for this effort. CSSC discussed revising the scope to address only specifications (without the plans). Freddie routed the scope or work to the CSSC by Email on 9 July 2002 for further comment.

## DIVISION 00 PROJECT MANUAL ARRANGEMENT

The arrangement of non-technical clauses for construction contracts has been an issue since Master Format 88. In the early 1990's, Don Carmen and George Norton were instrumental in drafting guidance that was distributed in 1992 PARC instruction letter. PARC IL 92-4 generalized the Master Format in a scheme that was achievable with the FAR clauses. The PARC IL 92-4 was rescinded in 1995 and replaced with EFAR 14.201-1.

EFAR 14.201-1 has a relationship between the USACE Contract Format (Sections 00100, 00700, 00800, etc.) and the Uniform Contract Format (UCF). The FAR matrix includes a listing of where contract clauses are assigned in the UCF. However, DFARS, EFARS and local clauses are not included in the published matrix, and most of the engineer/construction (FAR 52.236-\*) clauses are blank in the FAR matrix UCF column. So many of the clauses are assigned to the Standard Procurement System (SPS) matrix by the District's Systems Analyst. Since the EFAR 14.2 does not describe the logic for the 2 contract formats, the assignment of clauses is apparently made intuitively by the Systems Analyst, which is not very standardized (as was the intent of EFAR 14.201-1). This results in substantial disparities between which clauses are placed in sections 00700 and 00800. If the assignment of clauses in the USACE contract format is not consistent, then the meaning of the sections is ambiguous, and the benefits of standardization are lost.

The rescission of PARC IL 92-4 was made for several reasons: Contracting Officers were not familiar with the numbering system, were not aware of the correlation with private industry, and gave feedback to PARC that the detail in PARC 92-4 was not necessary. PARC IL 92-4 potentially caused contradictions with the FAR prescriptions. Not all potentially applicable FAR

clauses were included in PARC IL 92-4. The PARC IL 92-4 included some local clauses that were Division specific.

Justification for the USACE Contract Format should be provided in the guidance, either in the EFAR, or in the specification's Engineering Regulation. Section 00100 includes clauses only applicable to bidding and they are part of the bidding documents but not the contract. Section 00700 includes material normally not edited, and Section 00800 includes conditions specially tailored to the project. Thus, clauses with alternates (such as quantity surveys, and specifications and drawings for construction), clauses with fill-ins (such as liquidated damages, and physical data), and local clauses (which are subject to change over time and between districts) should be in section 00800.

Doug Crum and Don Carmen will draft recommendations for revision to EFAR 14.201-1 for presentation at the next CSSC meeting. The contracting departments demand the USACE Contract Format to be easy to implement in the SPS automated system, and justified. Revisions to the EFAR 14.201-1 must not affect the way Districts do business.

## STATUS UPDATES

Section 02490 Rock and Soil Anchors was published December 2001.

Section 02382 Articulating Concrete Block Revetments was published March 2002.

Roller compacted concrete is 75% complete. Completion date is 1 March 2002.

Concrete – Sections 03301 and 03307 are assumed to be complete. The funding expired, and there was no request to extend the MIPR. Product status is unknown.

Dredging section 02325 – The author suggested separate guide specifications for ancillary tasks, such as blasting, water control monitoring, etc. The CSSC did not see validity in these additional sections.

## TABLE OF CONTENTS FOR CLAUSES

The SAACON system for contracting generated a table of contents of the non-technical clauses for easy reference in locating clauses in the contract. The SPS system presently does not generate a table of contents. A relatively rapid method of producing table of contents for the clauses is attached in Enclosure 4.

## FUTURE CSSC MEETINGS

Sacramento and Seattle are being considered for the December 2002 meeting. Attendees should check airfare and report to Freddie. The next CSI convention is in Chicago, June 2003. The summer 2003 CSSC meeting could be tied to either the Infrastructure Conference, or the CSI Exposition.



ENCLOSURE 1

CORPS SPECIFICATIONS STEERING COMMITTEE  
MEETING ATTENDANCE  
Las Vegas, Nevada  
25 – 26 June 2002

Name	Organization	Phone
Joe Miller	NWD-MT-E	402-697-2649
Steven Goodin	SAD-MT-E	404-562-5115
Anil Nisargand	NWS-EC-DB-SP	206-764-3828
Tom Andre	LRP-ED-DT	412-395-7306
Steven P. Freitas	SPK-ED-M	916-557-7296
David Barber	SWD-MTE	214-767-2385
Larry Seals	LRD-MT-E	513-684-3071
Robert Iseli	LRD-MT-E	513-684-2997
Freddie Rush	MVD-TD-TE	601-634-5936
Carl Kersten	NAVFAC	757-322-4210
Jim Quinn	HND-ED-ES	256-895-1821
Hon-Ping Chee, (Bingo)	POD-CW-T	808-438-6965
Benny Hom	NAD-ET-O	718-765-7104
Rick Dahnke	CECW -ETE	202-761-4125
Doug Crum	MVP-ED-D	651-290-5645
Pat Robinsoi	Indyne	321-867-8630

## ENCLOSURE 2

### AGENDA CORPS SPECIFICATIONS STEERING COMMITTEE

#### TUESDAY, 25 JUNE 2002

0800 - 0805	Announcements	Rush
0805 - 0810	Review Agenda	Rush
0810 - 0830	HQUSACE/Navy Update	Dahnke/Kersten
0830 - 0840	Review and Approve Minutes of Previous Meeting	CSSC
0840 - 0900	Election of District Members	CSSC
0900 - 0945	SICCCB Update	Robinson
0945 - 1000	UFGS Maintenance	Dahnke/Quinn/Kersten
1000 - 1015	Break	
1015 - 1100	2003 Infrastructure Conf.	CSSC
1100 - 1145	Revised MasterFormat	CSSC
1145 - 1300	Lunch	
1300 - 1330	Bulk Purchase of Standards	CSSC
1330 - 1350	Commercial GS vs UFGS	CSSC
1350 - 1415	Hyperlinks	Quinn
1415 - 1430	IBC Adoption	CSSC
1430 - 1445	Break	
1445 - 1530	Joint ER on Plans & Specs	Rush/Dahnke/Freitas
1545 - 1600	Project Manual Arrangement	CSSC
1600 - 1615	Criteria Management System	CSSC
1615 - 1630	Summary & Recap	CSSC

#### WEDNESDAY, 26 JUNE 2002

0800 - 0900	New Issues	CSSC
0900 - 0930	Status of UFGS (CW)	
	Rock & Soil Anchors GS	Andre
	Concrete Restoration GS	Andre
	Dredging GS	Rush
	CEGS 03301/03700/03701	Rush
	ACB Revetment GS	Crum
	Combining UFGS	Quinn/Kersten
0930 - 0945	Break	
0945 - 1015	New/Update UFGS	CSSC
1015 - 1045	Open Discussion/Next Meeting	CSSC
1045 - 1100	Summary and Recap	CSSC

## Enclosure 3



### THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3010

29 MAY 2002

#### MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS


UNDER SECRETARIES OF DEFENSE  
ASSISTANT SECRETARIES OF DEFENSE  
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE  
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE  
ASSISTANTS TO THE SECRETARY OF DEFENSE  
DIRECTOR, ADMINISTRATION AND MANAGEMENT  
DIRECTORS OF THE DEFENSE AGENCIES  
DIRECTORS OF THE DOD FIELD ACTIVITIES  
DIRECTOR FOR LOGISTICS, JOINT STAFF (J-4)

SUBJECT: Department of Defense Unified Facilities Criteria

Guidance for developing and maintaining unified facilities design and construction criteria for planning, design, construction, sustainment, restoration and modernization of Department of Defense facilities is set forth in MIL-STD-3007, "Department of Defense Standard Practice for Unified Facilities Criteria (UFC) and Unified Facilities Guide Specifications (UFGS)." The current version is dated April 1, 2002. Department of Defense 4270.1-M (September 1987), "Policy Guidelines for Installation Planning, Design, Construction and Upkeep," is hereby cancelled.

This Unified Facilities Criteria (UFC) and Unified Facilities Guide Specifications (UFGS) are to be used by the Military Departments, the Defense Agencies and the DoD Field Activities for planning, design, construction, sustainment, restoration, and modernization of facilities, regardless of funding source.

MIL-STD-3007 is available on the worldwide web at <http://www.dsp.dla.mil> (click "Online Specs," then use ASSIST Quick Search for "3007") or <http://www.acq.osd.mil/ic/irm>.

  
E.C. Aldridge, Jr.



## Enclosure 4

### Building a Table of Contents from SPS

The general process is to dump the non-technical section from SPS into MS Word, use the MS Word automated features for creating a table of contents, and print to portable document format.

- 1) Create the MS Word file from SPS:
  - a) In SPS, highlight solicitation
  - b) Select [FILE] - [FILE PREVIEW]
  - c) When window pops up, press [ALT – F2] (do not select OK)
  - d) Store file in appropriate drive and directory by completing the SAVE-AS prompts. (Note that you may lose connection to SPS).
- 2) Start MS Word, and delete “DRAFT” markings. (If you release the SPS document, the “DRAFT” markings will not appear; so skip this step.)
  - a) Start MS Word and open file stored in Step 1.
  - b) Right click [FORMAT] and select [PICTURE] – [IMAGE CONTROL]
  - c) Change “Automatic” to “Black and White”
- 3) In MS Word, highlight the USACE Contract Format titles (Section 00100, 00700, 00800, etc), so that the automated table of contents function recognizes them:
  - a) Select [EDIT] – [REPLACE]. Expand box by selecting [MORE].
  - b) Check box for Match Case.
  - c) Select [FORMAT] – [STYLE] - [HEADING 1].
  - d) Enter Find What: “SECTION 00”; and Replace With: “SECTION 00”. (Do not type quotation marks.)
  - e) Select [Replace All]. Verify headings are formatted in document.
- 4) In MS Word, highlight the contract clauses, so that the automated table of contents function recognizes them:
  - a) Select [EDIT] – [REPLACE]. Verify box is still expanded – if not, select [MORE].
  - b) Verify box is checked for Match Case.
  - c) Select [FORMAT] – [STYLE] - [HEADING 2].
  - d) Enter Find What: “^p52.”; and Replace with: “^p52.” (The ^p is a code for paragraph).
  - e) Select [Replace All].
  - f) Enter Find What: “^p252.”; and Replace With: “^p252.”
  - g) Select [Replace All]. Verify headings are formatted in document.
- 5) Generate the table of content in MS Word:
  - a) Place cursor at location where table of contents will be inserted (between SF 1442 and bid schedule). Select [INSERT] – [INDEX AND TABLES...] – [TABLE OF CONTENTS].
  - b) Check box for “Show Page Numbers”.
  - c) Check box for “Right Align Page Numbers”.
  - d) Formats = “Formal”.

- e) Show level = 2.
  - f) Click “OK”.
  - g) Verify table of contents by scanning through to check for nonsense text that may have been highlighted by the find and replace routine.
- 6) Print the MS Word document to a .pdf file.